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ABSTRACT OF THE DISCLOSURE

An apparatus includes an optical element, a GRIN lens, and a detector. The optical element has a first optical aperture. The GRIN lens has first and second ends. The first end of the GRIN lens is positioned to receive light from the first optical aperture. The detector is configured to measure values of a characteristic of light emitted from the first end in response to multi-photon absorption events in a sample illuminated by light from the second end of the endoscopic probe.